

**Application No. 09/890,672
Amdt. Date July 28, 2003
Reply to Official Action of March 26, 2003**

REMARKS

The Official Action dated March 26, 2003 has been carefully considered. Accordingly, the changes presented herewith, taken with the following remarks, are believed sufficient to place the present application in condition for allowance. Reconsideration is respectfully requested.

By the present Amendment, an abstract of the disclosure has been added. The abstract is supported by the original disclosure and claims. The specification has also been amended to include the continuing data. Claims 1-2 and 7-9 have been amended as to matters of form. Claim 1 has also been amended to correct typographical errors. Claim 8 has also been amended to clarify the limitations therein. Claims 11-17 have been added. Support for claim 11 may be found in the specification at page 6, lines 19-21. Support for claim 13 may be found in the specification at page 15, lines 7-9. Support for claim 14 may be found in the specification at page 12, lines 26-32. Support for claim 15 may be found in the specification at page 10, lines 3-9. Support for claim 16 may be found in the specification at page 6, lines 5-26. Support for claim 17 may be found throughout the specification. It is believed that these changes do not involve any introduction of new matter, whereby entry is believed to be in order and is respectfully requested.

The specification was objected to by the Examiner because (1) the continuing data was missing and (2) an abstract was missing from the application. Accordingly, the specification has been amended to include the continuing data and an abstract has been added to the application. It is therefore submitted that the objections to the specification have been overcome. Reconsideration is respectfully requested.

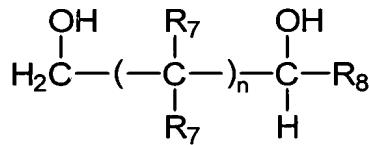
Claims 1-10 were objected to by the Examiner because claim 1 contained a typographical error. Accordingly, claim 1 has been amended to replace "isoubutyl" with "isobutyl". It is therefore submitted that the objection to claims 1-10 has been overcome. Reconsideration is respectfully requested.

Claims 1-10 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner asserted that the structure of the diol in claim 1 renders the claim vague and indefinite, since the valency of the left most carbon is not satisfied. Accordingly, Applicants have amended claim 1 to correct the typographical error, thereby satisfying the valency of the left most carbon. The Examiner also asserted that the identification/descriptions of claim 8 are indefinite for the use of trademark/tradenames Termamyl® and Phedebas®. Applicants traverse the Examiner's position. However, to expedite prosecution of the application, Applicants have amended claim 8 to delete reference to the trademarks/tradenames. Finally, the Examiner asserted that the phrase "with a liquid dishwashing detergent composition prepared according to claim 1", renders the claim indefinite, since there is not any process steps recited in claim 1. Applicants traverse the Examiner's position. However, to expedite prosecution of the application, Applicants have amended claim 1 to delete the word "prepared". It is therefore submitted that the rejection of claims 1-10 under 35 U.S.C. §112, second paragraph, has been overcome. Reconsideration is respectfully requested.

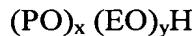
Claims 1-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kasturi et al, U.S. Patent No. 6,207,631. Specifically, the Examiner asserted that Kasturi et al disclose a composition for the hand washing of dishes comprising a homopolymer of (N,N-dialkylamino) alkyl acrylate, an anionic surfactant, amphoteric surfactants, 0.1-15% by

weight of one or more diamines having both a pK1 and pK2 in the range of 8-11.5, and a carrier component, such as propanediol and ethylene glycol. The Examiner asserted that as Kasturi et al generally disclose a dishwashing detergent composition comprising a carrier component, such as propanediol and ethylene glycol, it would have been obvious to one of ordinary skill in the art to formulate a dishwashing composition as presently claimed.

This rejection is traversed and reconsideration is respectfully requested. More particularly, according to claim 1, the invention is directed to a liquid dishwashing detergent composition suitable for use in hand dishwashing. The composition is characterized by: (a) a low molecular weight organic diamine having a pK1 and a pK2, wherein the pK1 and the pK2 of said diamine are both in the range of from 8.0 to 11.5; (b) an anionic surfactant; (c) an amphoteric surfactant; and (d) a solvent selected from the group consisting of a diol, a polymeric glycol and mixtures thereof. The diol is selected from the group consisting of:



wherein n = 0- 3, R₇ = H, methyl or ethyl; and R₈ = H, methyl, ethyl, propyl, isopropyl, butyl and isobutyl. The polymeric glycol is selected from the group consisting of:



wherein PO represents a propylene oxide group and EO represents an ethylene oxide group and x+y is from 17 to 68, and x/(x+y) is from 0.25 to 1.0. The pH (as measured as 10% aqueous solution) is from 5.0 to 12.5 and the mole ratio of said anionic surfactant to said amphoteric surfactant to said diamine is from 100:40:1 to 9:0.5:1.

According to claim 9, the invention is directed to a method for cleaning a substrate in a manual dishwashing operation. The method of a cleaning is characterized by the steps of:

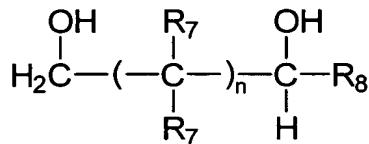
(a) contacting the substrate with a liquid dishwashing detergent composition according to claim 1; and (b) allowing the detergent composition to remain in contact with the substrate for a sufficient time to provide effective cleaning benefits to the substrate.

Applicants find no teaching, suggestion or reference in Kasturi et al of a liquid dishwashing detergent composition or method for cleaning as defined by the present claims. Kasturi et al teach detergent compositions comprising polymeric suds volume and suds duration enhancers and methods for washing with the same. Particularly, while Kasturi et al broadly disclose various detergent compositions, Applicants find no specific teaching in Kasturi et al relating to the claimed compositions or methods of cleaning as defined by claims 1-10. In fact, Kasturi et al teach that carriers are optional detergent ingredients.

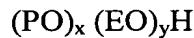
The broad teachings of a reference cannot preclude establishment of unobviousness for a specifically claimed invention not anticipated by the reference, *In re Orfeo*, 169 U.S.P.Q. 487 (CCPA 1971); *In re Waymouth*, 182 U.S.P.Q. 290 (CCPA 1974); and *In re Meyer*, 202 U.S.P.Q. 175 (CCPA 1979). Moreover, "a rejection cannot be predicated on the mere identification...of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed", *In re Werner Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

Kasturi et al merely disclose detergent compositions which may comprise optional detergent ingredients. Thus, Kasturi et al fail to disclose a specific composition comprising all four components as recited by the claims. Specifically, Kasturi et al fail to teach, suggest or recognize a composition or a method for cleaning in which the composition comprises: (a) a low molecular weight organic diamine having a pK1 and a pK2, wherein the pK1 and the pK2 of said diamine are both in the range of from 8.0 to 11.5; (b) an anionic surfactant; (c) an

amphoteric surfactant; and (d) a solvent selected from the group consisting of a diol, a polymeric glycol and mixtures thereof wherein said diol is selected from the group consisting of:



wherein $n + 0- 3$, $\text{R}_7 = \text{H}$, methyl or ethyl; and $\text{R}_8 = \text{H}$, methyl, ethyl, propyl, isopropyl, butyl and isobutyl; and wherein the polymeric glycol is selected from the group consisting of:



wherein PO represents a propylene oxide group and EO represents an ethylene oxide group and $x+y$ is from 17 to 68, and $x/(x+y)$ is from 0.25 to 1.0 and wherein the pH (as measured as 10% aqueous solution) is from 5.0 to 12.5. Furthermore, Kasturi et al fail to teach, suggest or recognize a composition wherein the mole ratio of the anionic surfactant to the amphoteric surfactant to the diamine is from 100:40:1 to 9:0.5:1 as required by the claims. As disclosed in the specification at page 3, lines 2-13, the claimed detergent composition provides superior cleaning, grease-cutting, physical stability, dissolution and rheological behavior, particularly, with the addition of a solvent, such as a diol, a polymeric glycol and mixtures thereof. Therefore, a person of ordinary skill in the art would not, from reading Kasturi et al, obtain any idea therefrom for arriving at the detergent composition and method for cleaning as presently claimed, or the unexpected improvements provided thereby.

Finally, references relied upon to support a rejection under 35 U.S.C. §103 must provide an enabling disclosure, i.e., it must place the claimed invention in the possession of the public, *In re Payne*, 203 USPQ 245 (CCPA 1979). The mere mention by Kasturi et al of a carrier as an "optional detergent ingredient" does not provide an enabling disclosure of the

claimed dishwashing detergent compositions and methods of cleaning. In view of the failure of Kasturi et al to teach, suggest or recognize dishwashing detergent compositions and methods of cleaning employing the ingredients as presently claimed, the reference does not provide an enabling disclosure of the present invention.

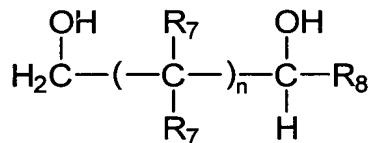
It is therefore submitted that claims 1-10 are nonobvious over and patentable distinguishable from Kasturi et al, whereby the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

Claims 1-6 and 9-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Vision et al, U.S. Patent No. 6,069,122 ('122) and Vision et al, U.S. Patent No. 5,990,065 ('065). These rejections are traversed and reconsideration is respectfully requested. Specifically, these references are available as prior art only under 35 U.S.C. §102(e) as they issued subsequent to the present application's effective filing date. The present application is entitled to the benefits of 35 U.S.C. §103(c). Submitted herewith is a Statement of Common Ownership which indicates that the invention disclosed and claimed in the present application was commonly owned with the ('122) and ('065) patents by The Procter & Gamble Company at the time the present invention was made. Thus, the ('122) and ('065) patents are not proper prior art with respect to the present application under 35 U.S.C. §103(c), whereby the above-noted rejections must be withdrawn. Reconsideration is respectfully requested.

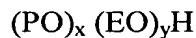
Claims 1-6 and 9-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ofosu-Asante et al, WO 98/28393. Specifically, the Examiner asserted that Ofosu-Asante et al disclose a composition comprising diamines having both a pK1 and pK2 in the range of 8-11.5, anionic surfactants, amphoteric surfactants and a carrier, such as propanediol and ethylene glycol. The Examiner asserted that as Ofosu-Asante et al generally disclose a dishwashing detergent composition comprising a carrier component, such as propanediol and

ethylene glycol, it would have been obvious to one of ordinary skill in the art to formulate a dishwashing composition as presently claimed.

This rejection is traversed and reconsideration is respectfully requested. More particularly, as noted above, according to claim 1, the invention is directed to a liquid dishwashing detergent composition suitable for use in hand dishwashing. The composition is characterized by: (a) a low molecular weight organic diamine having a pK1 and a pK2, wherein the pK1 and the pK2 of said diamine are both in the range of from 8.0 to 11.5; (b) an anionic surfactant; (c) an amphoteric surfactant; and (d) a solvent selected from the group consisting of a diol, a polymeric glycol and mixtures thereof. The diol is selected from the group consisting of:



wherein n = 0- 3, R₇ = H, methyl or ethyl; and R₈ = H, methyl, ethyl, propyl, isopropyl, butyl and isobutyl. The polymeric glycol is selected from the group consisting of:



wherein PO represents a propylene oxide group and EO represents an ethylene oxide group and x+y is from 17 to 68, and x/(x+y) is from 0.25 to 1.0. The pH (as measured as 10% aqueous solution) is from 5.0 to 12.5. The mole ratio of said anionic surfactant to said amphoteric surfactant to said diamine is from 100:40:1 to 9:0.5:1.

According to claim 9, the invention is directed to a method for cleaning a substrate in a manual dishwashing operation. The method is characterized by the steps of: (a) contacting the substrate with a liquid dishwashing detergent composition according to claim 1; and (b)

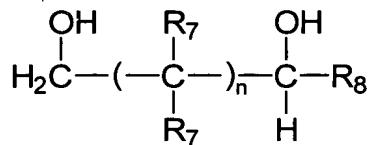
allowing the detergent composition to remain in contact with the substrate for a sufficient time to provide effective cleaning benefits to the substrate.

Applicants find no teaching, suggestion or reference in Ofosu-Asante et al of a liquid dishwashing detergent composition and method of cleaning as defined by the present claims. Ofosu-Asante et al teach dishwashing detergent compositions containing organic diamines. Particularly, while Ofosu-Asante et al broadly disclose various detergent compositions, Applicants find no specific teaching in Ofosu-Asante et al relating to the claimed compositions and methods of cleaning as recited in Claims 1-6 and 9-10. In fact, Ofosu-Asante et al disclose that both amphoteric surfactants and carriers are optional ingredients.

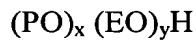
The broad teachings of a reference cannot preclude establishment of unobviousness for a specifically claimed invention not anticipated by the reference, *In re Orfeo, supra*; *In re Waymouth, supra*; and *In re Meyer, supra*. Moreover, "a rejection cannot be predicated on the mere identification...of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed", *In re Werner Kotzab, supra*.

Ofosu-Asante et al merely disclose detergent compositions which may comprise other detergent ingredients, such as an amphoteric surfactant and a carrier. Thus, Ofosu-Asante et al fail to disclose a specific composition comprising all four components in the specific mole ratio as recited by the claims. Specifically, Ofosu-Asante et al fail to teach, suggest or recognize a composition comprising: (a) a low molecular weight organic diamine having a pK1 and a pK2, wherein the pK1 and the pK2 of said diamine are both in the range of from 8.0 to 11.5; (b) an anionic surfactant; (c) an amphoteric surfactant; and (d) a solvent selected

from the group consisting of a diol, a polymeric glycol and mixtures thereof wherein said diol is selected from the group consisting of:



wherein $n = 0-3$, $\text{R}_7 = \text{H}$, methyl or ethyl; and $\text{R}_8 = \text{H}$, methyl, ethyl, propyl, isopropyl, butyl and isobutyl; and wherein the polymeric glycol is selected from the group consisting of:



wherein PO represents a propylene oxide group and EO represents an ethylene oxide group and $x+y$ is from 17 to 68, and $x/(x+y)$ is from 0.25 to 1.0; and wherein the pH (as measured as 10% aqueous solution) is from 5.0 to 12.5. Moreover, Ofosu-Asante et al fail to teach, suggest or recognize the claimed detergent composition wherein the mole ratio of said anionic surfactant to said amphoteric surfactant to said diamine is from 100:40:1 to 9:0.5. As noted above, the claimed detergent composition in the amounts recited provide superior cleaning, grease-cutting, physical stability, dissolution and rheological behavior. Therefore, a person of ordinary skill in the art would not, from reading Ofosu-Asante et al, obtain any idea therefrom for arriving at the detergent composition as presently claimed, or the unexpected improvements provided thereby.

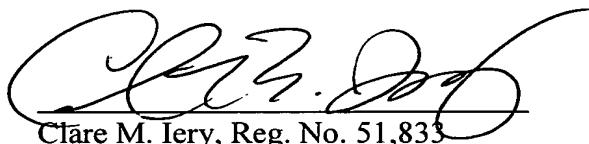
Finally, references relied upon to support a rejection under 35 U.S.C. §103 must provide an enabling disclosure, i.e., it must place the claimed invention in the possession of the public, *In re Payne*, 203 USPQ 245 (CCPA 1979). The mere mention by Ofosu-Asante et al of an amphoteric surfactant and a carrier as "optional detergent ingredients" does not provide an enabling disclosure of the claimed dishwashing detergent compositions and methods of cleaning. In view of the failure of Ofosu-Asante et al to teach, suggest or

recognize dishwashing detergent compositions and methods of cleaning as defined by claims 1-6 and 9-10, the reference does not provide an enabling disclosure of the present invention.

It is therefore submitted that claims 1-6 and 9-10 are nonobvious over and patentable distinguishable from Ofosu-Asante et al. Therefore, the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

It is believed that the above represents a complete response to the Examiner's objections and rejections of the claims under 35 U.S.C. §§103 and 112, second paragraph, and places the present application in condition for allowance. Reconsideration and an early allowance are requested.

Respectfully submitted,



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APPENDIX

ABSTRACT

Disclosed are detergent compositions comprising organic diamines, anionic surfactants and amphoteric surfactants including amine oxide for hand dishwashing which, by incorporating certain organic solvents, results in a liquid dishwashing detergent composition that is not only a more effective cleaning agent, but also offers improved physical and enzymatic stability and more convenient rheology and handling characteristics than typical liquid dishwashing compositions.